Marco AFC-330 Automated Fundus Camera

AFC-330

Applied Automation

Introducing the new **AFC-330**, the results of a 40-year pedigree of research and development that redefines the science of non-mydriatic fundus cameras. Quantum leaps in operator and patient interfaces, simplicity, automation, and total practice efficiencies, make this instrument a revolutionary advancement in retinal imaging.

The Advanced Fundus Camera

The AFC-330's automated functions breaks new ground in fundus imaging technology with focus on capturing the perfect picture every time, regardless of operator experience or skill level. The AFC-330 makes numerous command calculations per second. Only this level of automation can account for the accuracy and operational speed of this camera – the essential foundation of practice efficiency.

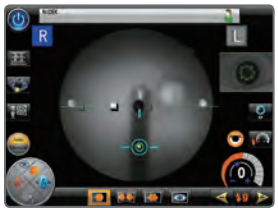
Three-Dimensional Automatic Alignment

- AutoTrack – patient movements are detected and followed automatically
- AutoFocus – for maximum ease of use
- AutoCapture – when optimal conditions are met, the photo is acquired

Being equipped with this level of sophistication, the AFC-330 is able to align and automatically switch from anterior to posterior focusing.

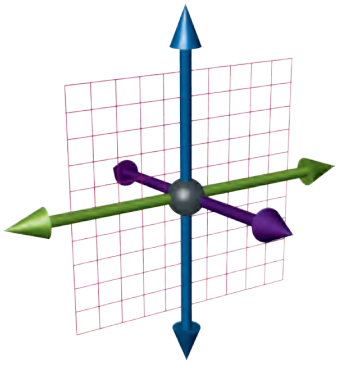
3D Auto Align

AutoSwitching



AutoFocus

AutoCapture

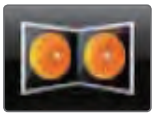


The AFC-330 tracks and adjusts to patient movements automatically in all three axes.

Benefits of Advanced Automation

The AFC-330 delivers unsurpassed ease of use with advanced features that enhance the management of retinal disease, such as glaucoma and diabetic retinopathy.

Available modes include:



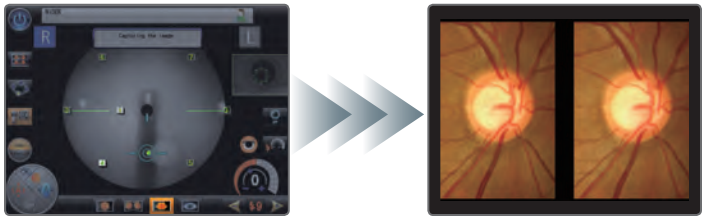
AutoStereo Pairing
Separation and focal adjustments without user intervention

AutoPanoramic Imaging
Seven fields, performed with automatic fixation adjustments

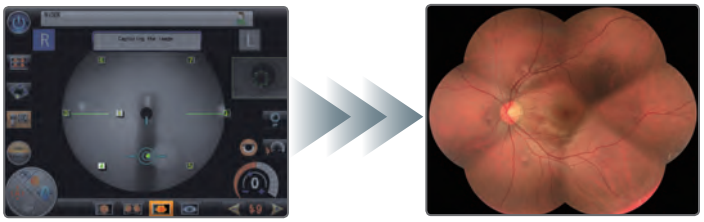
External Photography
Automatic adjustments to device settings for optimized results

Single 45°
Advanced or standard fixation

The AFC-330 now offers advanced standard-of-care imaging techniques that are practical to perform without disrupting patient flow.



Stereo Mode for Consistent and Precise Stereo Pairs



Panorama Mode for Multi-Field, Wider-Angle Imaging

Additional Automation

- Automatic pupil measurement as well as small-pupil mode activation
- Automatic compensation lens position indicator
- AutoBlink indicator avoids image retakes
- Review and automatic transmission of captured data

Functional Simplicity

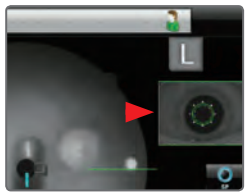
Modern Design The large color touchscreen on the AFC-330 places all functions at the operator's fingertips with intuitive menus and icons. Exam type, patient selection, database edits, and image review are all possible on the AFC-330's screen.

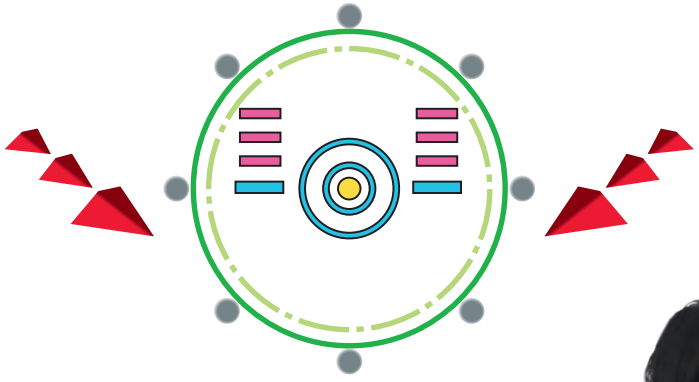
- Large 8.4" tilting, color touchscreen
- Small footprint with stand-alone operation
- One of the fastest automatic cameras on the market.

All in One The integrated high-resolution imaging sensor and internal PC eliminates complicated cabling, allowing the AFC-330 to communicate via LAN without the need for an external PC in the screening area, thereby maximizing office space.

Operator Guidance Features

The AFC-330 possesses the most advanced automatic features while preserving the manual override operation for certain clinical needs. All automatic features can be set as *fully automatic, semi-automatic,* or *fully manual* modes of operation.





Patient Position Indicator

The image interval indicator displays the time lapse between photos as well as pupil-size reticle. In both automatic and manual mode the AFC-330 provides the operator with on-screen directional indicators. The anterior monitor ensures patient position during retinal focusing.

Operational Efficiency

Performance and Versatility The speed and simplicity of the AFC-330 results in more accurate data, faster exams, and less need for retakes, elevating the patient's experience.

- Rapid processing and automated functions
- Less time at the device for patients and staff
- Fewer compromised images
- Fewer data transcription errors
- Space-saving design

Patient Comfort

The AFC-330 improves efficiency in time, space, and patient comfort. The lower flash intensity and sound-dampened mechanical movements, along with automatic blink and pupil measurement, make for the perfect picture every time with fewer retakes and happier patients. It is arguably one of the fastest automatic retinal cameras available with capture time often less than five seconds.

- Low-light photography mode with reduced flash intensity
- Quiet operation reduces patient anxiety, squinting, and blinking
- High-speed image capture
- Motorized chin rest for easy patient alignment

Software Solutions

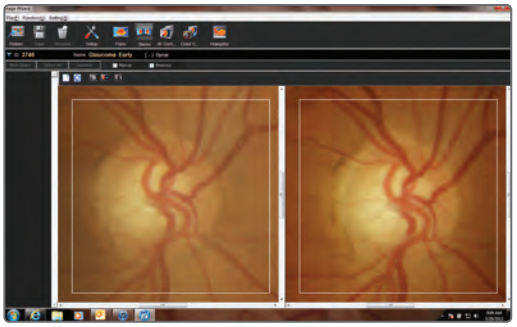
Connectivity is Key
NAVIS-EX is a fully networkable data management system with features that enhance the diagnostic utility of the AFC-330's images. NAVIS-EX allows seamless integration with most EMR vendors.

Seamless Connectivity

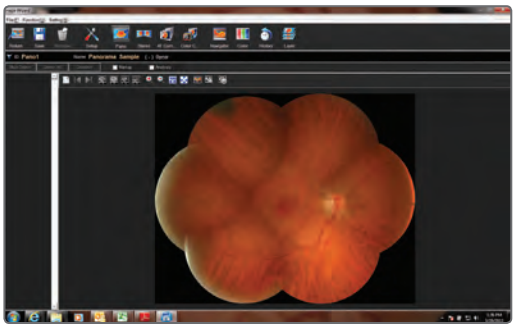
Data Management Flexibility The AFC-330 provides multiple data management solutions for any practice. Its space-saving design can efficiently export information across a network without the need of an additional PC in the screening area.

- Stand-alone device
- USB 2.0 storage media, printer
- LAN connection with JPEG and XML output
- NAVIS-EX software

LAN Connection



AutoStereo



AutoMontage

Chronological Data Review

Glaucoma Management

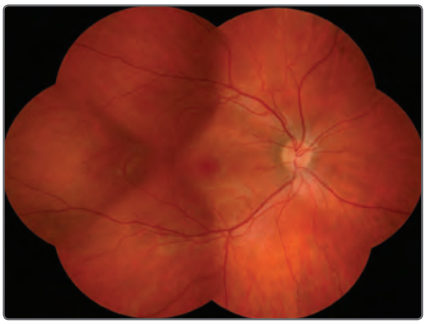
AFC-330 | Pedigree | Automation | Speed

3D AutoAlign in X-Y-Z

- Enhanced speed of operation
- Alignment indicators for manual overrides

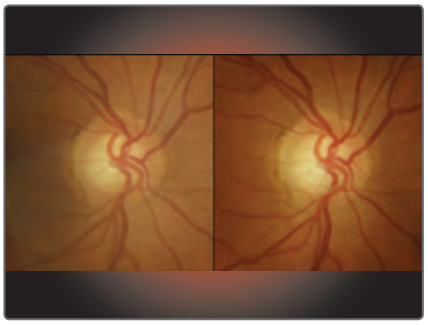
Auto Image Capture

- Auto blink detection
- Auto small pupil mode detection



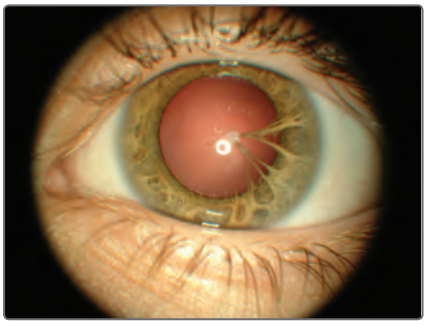
AutoPanorama

- Automatic programmed pattern
- Auto montaged using NAVIS-EX
- 2-9 fields



AutoStereo Pairs

- Automatic spatial separation
- Consistent results regardless of operator



External Photos

- Automatic adjustments for proper settings
- Automatic readjustments to retina mode

NAVIS-EX

- Chronological review & processing
- EMR integration

The AFC-330's advanced X-Y-Z eye tracking takes the best possible picture every time regardless of the operator's skill level, and typically in less than 5 seconds. Many automated features simplify the most advanced functions, such as automated stereo pairs and automated multiple field imaging. The AFC-330 delivers improved efficiency in time, space, and patient comfort. The lower flash intensity, sound dampened mechanical movements, automatic small pupil mode, and blink detection make for consistent results and fewer retakes. The integrated high resolution sensor and internal PC eliminates complicated cabling and allows the AFC-330 to stand alone without a connected PC or laptop in the same location. The AFC-330 can automatically export information across a network, to a USB device, or directly to the NAVIS-EX™ data management software. NAVIS-EX provides features that augment the diagnostic capabilities of the AFC-330.

AFC-330 Specifications

Main Body	
Type	Non-mydriatic Automated Fundus Camera
Angle of view	45º (33º in small-pupil photography mode)
Working distance	45.7mm (from objective lens to cornea)
Minimum pupil diameter	4.0mm (3.3mm in small-pupil photography mode)
Dioptric compensation for patient's eyes	-33 to +35 D total -33 to -7 D with minus dioptric lens -12 to +15 D with no dioptric lens +11 to +35 D with plus dioptric lens
Focusing method	Infrared focus split alignment Adjustable range: -12 to +15 D
Light source **For observation:** **For photography:**	 Halogen lamp 12V 50W Xenon flash lamp 300W
Flash intensity	17 levels from F1 (F4.0 +0.8 EV) to F17 (F16 +0.8 EV) 0.5 EV increments
Internal fixation target	LED (maximum 9 points)
External fixation target	Free-arm (optional)
Horizontal movement	40mm (back and forth) 85mm (left and right)
Vertical movement	32mm
Chinrest movement	62mm (up and down, motorized)
AutoTrack	X-Y-Z direction
Auto Capture	Automatic image capture
Camera	Built-in 12 megapixel CCD camera
Display	Tiltable 8.4-inch color LCD touchscreen
Interface	LAN, USB 2.0
Power Supply	AC 100-240 V ±10%, 50 / 60 Hz
Power Consumption	150 VA
Dimensions • Mass	316mm (W) x 518mm (D) x 579mm (H) • 29 kg 12.4" (W) x 20.4" (D) x 22.8" (H) • 64 lbs

Marco automated technologies share data and integrate to EMR systems with Marco Connect software

NIDEK | MARCO

Designed and Manufactured by NIDEK – Represented by MARCO

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S145000 BR-AFC-330